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January 31, 1989

Mr. Narindar Kumar
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Date:
Site Disposition:
EPA Project Manager:

Subject: Preliminary Reassessment
Chevron Chemical Company/Ortho
Orlando, Orange County, Florida
EPA ID No. FLD004064242
TDD No. F4-8808-22

Dear Mr. Kumar:

FIT 4 conducted a preliminary reassessment of the Chevron Chemical Company/Ortho site in Orlando, Orange County, Florida. The reassessment included a review of EPA and state file material, completion of a target survey, and an offsite reconnaissance of the facility and surrounding areas. The facility is located at 3100 Orange Blossom Trail north of Orlando and is presently operated by Cargo Transport and Rental Inc.

Chevron Chemical/Ortho owned and operated a chemical-blending facility for pesticides and other crop sprays between the years 1950-1976. Two washing ponds were created on site to contain the water and residue generated from the washing of chemical barrels. The ponds were approximately 20 feet by 60 feet with a depth of 3 feet into the surface soils. Use of the washing ponds was terminated in 1976 when the facility was sold to Central Florida Mack Truck Company. The ponds were excavated to a depth of approximately 14 feet below land surface. The areas were then filled with soil, automobile wreckage, and cement. Chevron Chemical Company later employed Dayes and Moore (a consulting firm) to conduct a contamination study at the facility. The results of that study showed that, in groundwater samples, concentrations of pesticides, such as Lindane, chlordane, and DDD, as well as arsenic, exceeded by up to an order of magnitude those set levels by the State Maximum Contaminant Levels (MCL) and the U. S. Environmental Protection Agency (Ref. 1, p. 3-1).

The former Chevron/Ortho facility lies in the Atlantic Coastal Plain Physiographic Province in central Florida. Groundwater occurs under non-artesian conditions near the ground surface and artesian conditions in deeper stratigraphic units (Ref. 2, p.82). Recharge to the groundwater is through precipitation, with the net annual rainfall being 3 inches (Ref. 3). Karst topography is present in much of Central Florida including the Orlando area (Ref. 2).

The surficial, non-artesian aquifer consists of unconsolidated sands and clayey sands of post-Miocene age (Ref. 2, p.82). This aquifer begins at land surface and extends to approximately 40 feet below land surface (Ref. 2, p. 83). The water table is located between 0 and 20 feet below land surface (Ref. 2, p. 83).

Several artesian aquifers are located beneath the surficial aquifer within the confining beds of the Hawthorn formation. These aquifers range from depth of 60 to 150 feet below land surface (Ref. 2, p.88). They are composed of discontinuous shell beds, sand and gravel zones or thin limestone lenses.

The primary aquifer utilized in the study area is the Floridan. The Floridan, which is below the artesian aquifers, is a continuous sequence of limestones and dolomites of generally high permeability. The units are mostly of middle and late Tertiary age and are hydraulically connected throughout (Ref. 4, p. B44 B45). This aquifer supplies most of the state of Florida with fresh water (Ref. 5, p. 176). Common well yields range from 500 to 1,000 gallons per minute (Ref. 5, p. 174). This aquifer extends to approximately 2000 feet below land surface (Ref. 2, p. 91).

A drive-by reconnaissance located no private wells within 4 miles of Chevron/Ortho (Ref. 6). The area surrounding the facility receives potable water from the Orlando Utilities Commission. The Orlando Utilities Commission has a plant with adjacent wellfields approximately 2.8 miles west the site. This wellfield draws from the Floridan aquifer. All of their plants are connected and serve a total of 342,326 persons (Ref. 7).

Surface water is not utilized for consumption in this area. Locally, surface water flow is to the northeast into Lake Silver or Lake Fairview (Ref. 8). The facility has 11 lakes around it within a 3-mile radius (Ref. 8). These lakes are utilized for recreational purposes. There is no evidence of any endangered species in the area (Ref. 9).

Based upon the enclosures, the uncertainty of the amount of possible contaminants, the previous careless disposal practices, and the population potentially affected by contamination of the ground and surface waters, a screening site inspection is recommended on a ~~medium~~ High-priority basis. If you have any questions concerning this matter, feel free to contact me at NUS Corporation.

Very truly yours,

Approved:

Joseph Baer
Geologist

JB/dwf

Enclosures